

10/ 087728 cfe  
**BLAKELY SOKOLOFF TAYLOR & ZAFMAN**

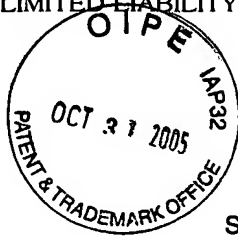
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INTELLECTUAL PROPERTY LAW

SILICON VALLEY

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SEATTLE, WA

June 24, 2005

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**Certificate**  
**NOV 04 2005**  
**of Correction**

Re: **CERTIFICATE OF CORRECTION**  
U. S. Letters Patent No. 6,888,856 *B2*  
Issued: May 3, 2005  
For: **METHOD AND APPARATUS FOR**  
**FILTERING AN OPTICAL BEAM**  
Inventor: Green et al.  
Our File No. 42390.P14868C

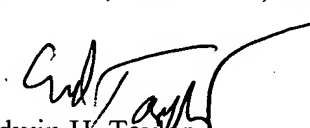
Dear Sir:

Enclosed is the Certificate of Correction (two copies) for the above-referenced patent.  
This request for correction is made under rule 322 of the Rules of Practice and 35 U.S.C.  
Section 254.

Find enclosed a copy of the allowed claims and the Notice of Allowability dated  
October 21, 2004.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

  
Edwin H. Taylor  
Reg. No. 25,129

EHT/keh  
Enclosures

NOV 08 2005

**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

**PATENT NO.** : 6,888,856 *B2*

**DATED** : May 3, 2005

**INVENTOR(S)** : Green, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete claims 1-32 and insert the attached set of claims.

**MAILING ADDRESS OF SENDER**  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN  
12400 Wilshire Blvd. 7th floor  
Los Angeles, CA 90025-1026

**PATENT NO.** 6,888,856

**Certificate of Correction (PTO Form 1050)-Amended**

NOV 08 2005

**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

**PATENT NO.** : 6,888,856 B2  
**DATED** : May 3, 2005  
**INVENTOR(S)** : Green, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete claims 1-32 and insert the attached set of claims.

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BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN  
12400 Wilshire Blvd. 7th floor  
Los Angeles, CA 90025-1026

**PATENT NO.** 6,888,856

**Certificate of Correction (PTO Form 1050)-Amended**

NOV 08 2005



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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www.uspto.gov



NOTICE OF ALLOWANCE AND FEE(S) DUE

Blakely Sokoloff Taylor & Zafman LLP  
12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1030

10/21/2004

RECEIVED

OCT 25 2004

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
LOS ANGELES

EXAMINER	
JACKSON, CORNELIUS H	
ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 10/21/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/087,728

02/28/2002

Evan D.H. Green

NUF0021CON

7513

TITLE OF INVENTION: METHOD AND APPARATUS FOR FILTERING AN OPTICAL BEAM

P14968C

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1370	\$300	\$1670	01/21/2005

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 or Fax (703) 746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

7590

10/21/2004

Blakely Sokoloff Taylor & Zafman LLP  
 12400 Wilshire Boulevard  
 Seventh Floor  
 Los Angeles, CA 90025-1030



Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (703) 746-4000, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,728	02/28/2002	Evan D.H. Green	NUFO021CON	7513

TITLE OF INVENTION: METHOD AND APPARATUS FOR FILTERING AN OPTICAL BEAM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1370	\$300	\$1670	01/21/2005

EXAMINER	ART UNIT	CLASS-SUBCLASS
JACKSON, CORNELIUS H	2828	372-020000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



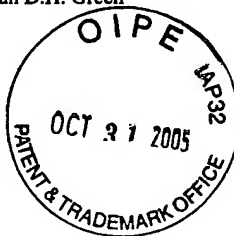
# UNITED STATES PATENT AND TRADEMARK OFFICE

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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,728	02/28/2002	Evan D.H. Green	NUFO021CON	7513

7590 10/21/2004

Blakely Sokoloff Taylor & Zafman LLP  
12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1030



EXAMINER

JACKSON, CORNELIUS H

ART UNIT PAPER NUMBER

2828

DATE MAILED: 10/21/2004

## Notice of Fee Increase on October 1, 2004

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2004, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" because some fees will increase effective October 1, 2004. See Revision of Patent Fees for Fiscal Year 2005; Final Rule, 69 Fed. Reg. 52604, 52606 (May 10, 2004).

The current fee schedule is accessible from WEB site (<http://www.uspto.gov/main/howtofees.htm>).

If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2004 (or mailed with a certificate of mailing on or after October 1, 2004), the issue fee paid should be the fee that is required at the time the fee is paid. See Manual of Patent Examining Procedure (MPEP), Section 1306 (Eighth Edition, Rev. 2, May 2004). If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See MPEP Section 1308.01.

Effective October 1, 2004, 37 CFR 1.18 is amended by revising paragraphs (a) through (c) to read as set forth below.

### Section 1.18 Patent post allowance (including issue) fees.

- (a) Issue fee for issuing each original or reissue patent, except a design or plant patent:
- By a small entity (Sec. 1.27(a))..... \$685.00
  - By other than a small entity..... \$1,370.00
- (b) Issue fee for issuing a design patent:
- By a small entity (Sec. 1.27(a))..... \$245.00
  - By other than a small entity..... \$490.00
- (c) Issue fee for issuing a plant patent:
- By a small entity (Sec. 1.27(a))..... \$330.00
  - By other than a small entity..... \$660.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.



# UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,728	02/28/2002	Evan D.H. Green	NUFO021CON	7513

7590 10/21/2004

Blakely Sokoloff Taylor & Zafman LLP  
12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1030



EXAMINER
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JACKSON, CORNELIUS H

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 10/21/2004

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 59 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 59 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

**Notice of Allowability**

Application No.

10/087,728

Examiner

Cornelius H. Jackson

Applicant(s)

GREEN ET AL.

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 16 August 2004.
2. ☒ The allowed claim(s) is/are 1,3-28 and 33-45.
3. ☒ The drawings filed on 30 June 2003 and 21 June 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 8/16/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.



Art Unit: 2828



## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 16 August 2004 has been entered.
2. Acknowledgment is made that applicant's Amendment, filed on 16 August 2004, has been entered. Upon entrance of the Amendment, claims 1, 3-28 and 33-36 were amended, claim 2 was canceled, and claims 37-45 were added. Claims 1, 3-28 and 33-45 are now pending in the current application.

### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 16 August 2004 was filed after the mailing date of the Notice of Allowance on 12 May 2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Allowable Subject Matter***

4. Claims 1, 3-28 and 33-45 are allowed.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



chj

  
MIN SUN HARVEY  
PATENT EXAMINER

~~STATEMENT~~ STATEMENT BY APPLICANT

**(use as many sheets as necessary)**

Application Number	10/087.728
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Filing Date	February 28, 2002
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First Named Inventor:	Green et al.
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Art Unit	2828
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Examiner Name	Jackson, Cornelius H.
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Attorney Docket Number	42P14868C
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**U.S. PATENT DOCUMENTS**

Examiner Initials*	Serial No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)				
CJH	1.	US-	3,788,743	01-29-1974	George	
	2.	US-	3,899,748	08-12-1975	Bodlaj	
	3.	US-	3,921,099	11-18-1975	Abrams et al.	
	4.	US-	3,965,440	06-22-1976	Graves	
	5.	US-	4,730,105	03-08-1988	Mitschke et al.	
	6.	US-	4,934,816	06-19-1990	Silver et al.	
	7.	US-	5,022,745	06-11-1991	Zayhowski et al.	
	8.	US-	5,245,626	09-14-1993	Burke et al.	
	9.	US-	5,251,222	10-05-1993	Hester et al.	
	10.	US-	5,289,491	02-22-1994	Dixon	
	11.	US-	5,412,676	05-02-1995	Schnier et al.	
	12.	US-	6,151,337	11-21-2000	Carlsten et al.	
	13.	US-	6,201,638 B1	03-13-2001	Hall et al.	
	14.	US-	6,263,004 B1	07-17-2001	Arvidsson et al.	
	15.	US-	6,470,036 B1	10-22-2002	Bailey et al.	
	16.	US-	6,600,760 B1	07-29-2003	Green et al.	

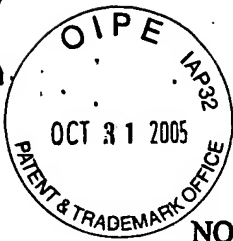
## FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	9/30/04
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Based on Form PTO/SB/08A (04-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 05/09/03



**NOTICE OF OFFICE PLAN TO CEASE SUPPLYING COPIES OF CITED U.S. PATENT  
REFERENCES WITH OFFICE ACTIONS, AND PILOT TO EVALUATE THE  
ALTERNATIVE OF PROVIDING ELECTRONIC ACCESS TO SUCH U.S. PATENT  
REFERENCES**

**Summary**

The United States Patent and Trademark Office (Office or USPTO) plans in the near future to: (1) cease mailing copies of U.S. patents and U.S. patent application publications (US patent references) with Office actions except for citations made during the international stage of an international application under the Patent Cooperation Treaty and those made during reexamination proceedings; and (2) provide electronic access to, with convenient downloading capability of, the US patent references cited in an Office action via the Office's private Patent Application Information Retrieval (PAIR) system which has a new feature called "E-Patent Reference." Before ceasing to provide copies of U.S. patent references with Office actions, the Office shall test the feasibility of the E-Patent Reference feature by conducting a two-month pilot project starting with Office actions mailed after December 1, 2003. The Office shall evaluate the pilot project and publish the results in a notice which will be posted on the Office's web site ([www.USPTO.gov](http://www.USPTO.gov)) and in the Patent Official Gazette (O.G.). In order to use the new E-Patent Reference feature during the pilot period, or when the Office ceases to send copies of U.S. patent references with Office actions, the applicant must: (1) obtain a digital certificate from the Office; (2) obtain a customer number from the Office, and (3) properly associate applications with the customer number. The pilot project does not involve or affect the current Office practice of supplying paper copies of foreign patent documents and non-patent literature with Office actions. Paper copies of references will continue to be provided by the USPTO for searches and written opinions prepared by the USPTO for international applications during the international stage and for reexamination proceedings.

**Description of Pilot Project to Provide Electronic Access to Cited U.S. Patent References**

On December 1, 2003, the Office will make available a new feature, E-Patent Reference, in the Office's private PAIR system, to allow more convenient downloading of U.S. patents and U.S. patent application publications. The new feature will allow an authorized user of private PAIR to download some or all of the U.S. patents and U.S. patent application publications cited by an examiner on form PTO-892 in Office actions, as well as U.S. patents and U.S. patent application publications submitted by applicants on form PTO/SB08 (1449) as part of an IDS. The retrieval of some or all of the documents may be performed in one downloading step with the documents encoded as Adobe Portable Document format (.pdf) files, which is an improvement over the current page-by-page retrieval capability from other USPTO systems.

references. The Office plans to continue to provide access to the E-Patent Reference feature during its evaluation of the pilot.

### **Comments**

Comments concerning the E-Patent Reference feature should be in writing and directed to the Electronic Business Center (EBC) at the USPTO by electronic mail at [eReference@uspto.gov](mailto:eReference@uspto.gov) or by facsimile to (703) 308-2840. Comments will be posted and made available for public inspection. To ensure that comments are considered in the evaluation of the pilot project, comments should be submitted in writing by January 15, 2004.

Comments with respect to specific applications should be sent to the Technology Centers' customer service centers. Comments concerning digital certificates, customer numbers, and associating customer numbers with applications should be sent to the Electronic Business Center (EBC) at the USPTO by facsimile at (703) 308-2840 or by e-mail at [EBC@uspto.gov](mailto:EBC@uspto.gov).

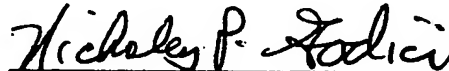
### **Implementation after Pilot**

After the pilot, its evaluation, and publication of a subsequent notice as indicated above, the Office expects to implement its plan to cease mailing paper copies of U.S. patent references cited during examination of non provisional applications on or after February 2, 2004; although copies of cited foreign patent documents, as well as non-patent literature, will still be mailed to the applicant until such time as substantially all applications have been scanned into IFW.

### **For Further Information Contact**

Technical information on the operation of the IFW system can be found on the USPTO website at <http://www.uspto.gov/web/patents/ifw/index.html>. Comments concerning the E-Patent Reference feature and questions concerning the operation of the PAIR system should be directed to the EBC at the USPTO at (866) 217-9197. The EBC may also be contacted by facsimile at (703) 308-2840 or by e-mail at [EBC@uspto.gov](mailto:EBC@uspto.gov).

Date: 12/1/03

  
Nicholas P. Godici  
Commissioner for Patents



Allowed Claims 1, 3-28, and 33-45

1. An optical communication apparatus including a tunable filter, the tunable filter being tunable to each selected center wavelength of a number of channels, and each of the channels centered on a corresponding gridline of a selected wavelength grid, the tunable filter comprising:

a grid generator having reflective surfaces, mounted for optical alignment in an optical path of a beam, wherein the grid generator including a first selected optical path length determinative of a first free spectral range having a first plurality of transmission peaks corresponding to gridlines of the selected wavelength grid;

a channel selector having reflected surfaces, mounted for optical alignment in the optical path of the beam, wherein the channel selector including a tunable second optical path length determinative of a second free spectral range having a second plurality of transmission peaks within the selected wavelength grid, wherein the second free spectral range (FSR2) is related to the first free spectral range (FSR1) by the equation:

$$\text{FSR2} \approx (M / M \pm 1)(\text{FSR1})$$

wherein M is the total number of channels within the selected wavelength grid;

means for maintaining the first selected optical path length of the grid generator; and

means for varying the tunable second optical path length of the channel selector to tune the optical beam to a selected channel of the wavelength grid and substantially attenuate the other channels of the wavelength grid.

2. (Cancelled)

3. The optical communication apparatus of Claim 1, wherein a finesse of the channel selector substantially corresponds with less than the number of channels of the selected wavelength grid.

4. The optical communication apparatus of Claim 1, wherein the grid generator comprises at least one of a Fabry-Perot filter and an interference element.

5. The optical communication apparatus of Claim 1, wherein the grid generator comprises an etalon.
6. The optical communication apparatus of Claim 1, wherein the grid generator comprises an etalon; and wherein the means for maintaining the first optical path length of the grid generator comprises a thermal controller to control a temperature of the etalon.
7. The optical communication apparatus of Claim 1, wherein the channel selector comprises at least one of: a diffraction element, an interference element, and a birefringent element.
8. The optical communication apparatus of Claim 1, wherein the means for varying the tunable second optical path length of the channel selector comprises a mechanical actuator to tune the channel selector by varying the tunable second optical path length of the channel selector.
9. The optical communication apparatus of Claim 1, wherein the means for varying the tunable second optical path length of the channel selector comprises a thermal actuator to tune the channel selector by varying a temperature of the channel selector.
10. The optical communication apparatus of Claim 1, wherein the means for varying the tunable second optical path length of the channel selector comprises an electro-optic actuator to tune the channel selector by varying the tunable second optical path length of the channel selector.
11. The optical communication apparatus of Claim 1, wherein the channel selector includes at least one of selected length and a tunable index of refraction.
12. The optical communication apparatus of Claim 1, wherein the channel selector includes a tunable length and a selected index of refraction.
13. The optical communication apparatus of Claim 1, wherein the channel selector comprises:

a gas spaced etalon including a gap to hold a gas, the gas spaced etalon tunable by adjusting a pressure of the gas within the gap to vary the second optical path length.

14. The optical communication apparatus of Claim 1, wherein the channel selector comprises:  
an etalon electrically tunable in response to an applied electric field to vary the second optical path length.

15. The optical communication apparatus of Claim 1, wherein the channel selector further comprises:  
an etalon thermally tunable in response to an applied thermal energy to vary the second optical path length.

16. The optical communication apparatus of Claim 1, wherein the channel selector comprises:  
a semiconductor element with a tunable index of refraction responsive to an applied electric field to vary the second optical path length.

17. The optical communication apparatus of Claim 7, wherein the birefringent element includes at least one of: a Pockels cell and a Kerr cell.

18. The optical communication apparatus of Claim 7, wherein the interference element comprises:  
a wedge-shaped etalon.

19. The optical communication apparatus of Claim 18, wherein the interference element comprises at least one of a wedge-shaped solid etalon and a wedge-shaped air gap etalon.

20. The optical communication apparatus of Claim 18, wherein the means for varying the tunable second optical path length comprises an actuator for translating the wedge-shaped etalon across the optical path of the beam to tune the second optical path length.



21. The optical communication apparatus of Claim 1, wherein the channel selector comprises a grating; and wherein the means for varying the tunable second optical path length of the channel selector comprises an actuator for varying an angle of the grating with respect to the optical path of the beam to tune the beam to the selected channel of the wavelength grid.

22. The optical communication apparatus of Claim 1, further comprising:  
a logic to tune the channel selector to the selected channel of the wavelength grid.

23. The optical communication apparatus of Claim 1, further comprising:  
a logic to tune the grid generator to the selected wavelength grid.

24. The optical communication apparatus of Claim 1, further comprising:  
a gain medium to emit the beam, and the gain medium capable of accepting feedback to tune the gain medium to a selected one of the number of channels of the wavelength grid.

25. The optical communication apparatus of claim 1, further comprising:  
a first optical circulator including a first port, a second port, and a third port; and  
a second optical circulator including a first port, a second port, and a third port,  
wherein the tunable filter optically coupled between the second port of the first optical circulator and the first port of the second optical circulator, the tunable filter to tune a selected one of the number of channels of the wavelength grid to pass between the second port of the first optical circulator and the first port of the second optical circulator.

26. The optical communication apparatus of Claim 1, further comprising:  
a gain medium tunable to emit the beam at a selected wavelength;  
the tunable filter including an input and an output, the tunable filter input positioned in the optical path of the beam  
an error detector to detect a difference in energy levels of the beam at the input and the output of the tunable filter and to generate an error signal based on the difference; and

a logic to receive the error signal and to adjust a control parameter of the gain medium in response to the error signal.

27. The optical communication apparatus of Claim 1, wherein the grid generator comprising:

a gain medium to emit the beam, the gain medium including a front facet and a rear facet, wherein the first selected optical path length between the front facet and the rear facet determinative of the first free spectral range and corresponding to the spacing between adjacent gridlines of the selected wavelength grid.

28. The optical communication apparatus of Claim 1, wherein the channel selector comprising:

a gain medium to emit the beam, the gain medium including a front facet and a rear facet, wherein the tunable second selected optical path length between the front facet and the rear facet determinative of the second free spectral range.

Claims 29-32 (Cancelled)

33. A method to filter an optical beam, comprising:

generating a first set of wavelengths corresponding to a first plurality of transmission peaks within the optical beam, the first set of wavelengths having a first free spectral range corresponding to the center wavelengths of each of the channels of the selected wavelength grid;

generating a variable second set of wavelengths corresponding to a second plurality of transmission peaks within the optical beam, the variable second set of wavelengths having a second free spectral range, wherein the second free spectral range (FSR2) is related to the first free spectral range (FSR1) by the equation:

$$FSR2 \approx (M / M \pm 1)(FSR1)$$

wherein M is the total number of channels within the selected wavelength grid;

generating a tuning signal at a channel tuner; and

varying the variable second set of wavelengths based on the tuning signal to select a desired channel of the channels of the selected wavelength grid.

34. The method of Claim 33, wherein generating the first set of wavelengths comprises aligning a grid generator having an optical path length determinative of the first free spectral range with the optical beam.

35. The method of Claim 33, wherein generating the variable second set of wavelengths comprises aligning a channel selector having a variable optical path length determinative of the second free spectral range with the optical beam.

36. The method of Claim 35, wherein varying the variable second set of wavelengths comprises varying the optical path length of the channel selector.

37. An apparatus, comprising:

a grid generator in an optical path of an optical beam, wherein the grid generator including a first selected optical path length determinative of a first free spectral range having a first plurality of transmission peaks corresponding to gridlines of a selected wavelength grid;

a channel selector in the optical path of the optical beam, wherein the channel selector including a tunable second optical path length determinative of a second free spectral range having a second plurality of transmission peaks within the selected wavelength grid, wherein the second free spectral range (FSR2) is related to the first free spectral range (FSR1) by the equation:

$$FSR2 \approx (M / M \pm 1)(FSR1)$$

wherein M is the total number of channels within the selected wavelength grid;

a grid controller operatively coupled to the grid generator to tune the grid generator to the selected wavelength grid by adjusting the first selected optical path length of the grid generator; and

a channel tuner operatively coupled to the channel selector to tune the channel selector to a selected channel of the channels of the wavelength grid by adjusting the tunable second optical path length of the channel selector.

38. The apparatus of claim 37, further comprising:

a gain medium including a front facet and a rear facet, the optical beam to be emitted from the front facet;

a reflector positioned in the optical path of the optical beam, the grid generator and the channel selector positioned between the gain medium and the reflector, a laser cavity defined by the rear facet and the reflector; and

an output assembly including coupling optics, the output assembly optically coupled to the rear facet of the gain medium.

39. The apparatus of claim 37, further comprising a thermal actuator thermally coupled to the grid generator to adjust the first selected optical path length of the grid generator, the thermal actuator operatively coupled to the grid controller.

40. The apparatus of claim 37, further comprising a thermal actuator thermally coupled to the channel selector to adjust the tunable second optical path length of the channel selector, the thermal actuator operatively coupled to the channel tuner.

41. The apparatus of claim 37, further comprising an electro-optic actuator coupled to the channel selector to adjust the tunable second optical path length of the channel selector, the electro-optic actuator operatively coupled to the channel tuner.

42. The apparatus of claim 37, further comprising an actuator coupled to the channel selector to move the channel selector to adjust the tunable second optical path length of the channel selector, the actuator operatively coupled to the channel tuner.

43. The apparatus of claim 37, further comprising:

a first optical circulator including a first port, a second port, and a third port; and

a second optical circulator including a first port, a second port, and a third port,

wherein the grid generator and the channel selector optically coupled between the second port of the first optical circulator and the first port of the second optical circulator, the third port of the first optical circulator optically coupled to the third port of the second optical circulator,

wherein the optical beam to enter the first port of the first optical circulator and to exit the second port of the second optical circulator.

44. The apparatus of claim 37, further comprising:

an error detector including a first photodetector positioned in the optical beam before the grid generator and a second photodetector positioned in the optical beam after the channel selector, wherein the error detector to generate an error signal based on a difference in energy levels of the optical beam detected at the first photodetector and the second photodetector.

45. The optical communication apparatus of claim 25 wherein the third port of the first optical circulator optically coupled to the third port of the second optical circulator, wherein non-selected channels of the wavelength grid to exit the third port of the first optical circulator and to enter the third port of the second optical circulator.